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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,861	04/15/2004	Jimmy TzeMing Pang	S104.12-0056/STL 11441	7109

7590 08/30/2006

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EXAMINER
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MERCEDES, DISMERY E

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/824,861	<b>Applicant(s)</b> PANG ET AL.	
	<b>Examiner</b> Dismery E. Mercedes	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.  
 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4-15 and 18-23 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1,4-6,8-12,15,18,20-22 is/are rejected.  
 7) ☒ Claim(s) 7,13,14,19 and 23 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1,15 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1,4-6,8-9,10,15,17-18,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiselogel (US 6,130,796) in view of Swize (US 7,054,091).

As to Claim 1, Wiselogel discloses identifying a last usable, beyond a default maximum track, track as a function of a parameter (according to Applicant's definition of an usable on page 6, lines 1-7 of instant specification, the examiner believes Wiselogel discloses a last usable track as claimed, as depicted in Fig.4, when the actuator encounters an inner-outer diameter crash stop & as depicted in Fig.4, 201,204,102-104); and defining a standoff band of tracks relative to the last usable track to obtain an achieved maximum track on the surface (according to Applicant's definition of standoff band of tracks, page 6, lines 10-15 of instant specification, the examiner believes Wiselogel discloses a standoff band of tracks as claimed, as depicted in Fig.4, "102, 103, 104, and 203"; col.2, lines 35-50; col.4, lines 23-64). Wiselogel fails to particularly disclose the last usable track is identified as a

function of a bias or position parameter. However, Swize discloses such (col.8, line 62-col.9, line 43, wherein the crash stop is detected based on the position of the carriage assembly).

As to Claim 4, Wiseloge further discloses wherein identifying the last usable track on the surface further comprises identifying the last usable track on a recording media surface (as depicted in Fig.4).

As to Claim 5, Swize further discloses identifying usable track as a function of a bias parameter associated with an actuator which positions a data head over the recording media (col.9, lines 50-65).

As to Claim 6, Swize further discloses, wherein identifying the last usable track as a function of when the bias parameter exceeds a threshold (col.9, lines 1-34, wherein it detects if the current (bias) moves faster or slower than a preset value).

As to Claim 8, Swize further discloses identifying the last usable track as a function of when the bias parameter is indicative of an obstruction encountered by the actuator (col.9, lines 1-34).

As to Claim 9, Wiseloge further discloses wherein the obstruction is an inner diameter crash stop (as depicted in Fig.4, when the actuator encounters an inner-outer diameter crash stop).

As to Claim 10, Swize further discloses wherein identifying the last usable track as a function of when a rate of change of the bias parameter exceeds a threshold rate of change of the bias parameter (col.9, lines 25-40).

As to Claims 15,17-18,20 are apparatus claims drawn to the method of claims 1,5-6,8-10 therefore are rejected for similar reasons as set forth in the rejection of claims 1,5-6,8-10, above.

1. Claims 11-12,21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiseloge in view of Swize, further in view of Emo et al. (US 6,260,257).

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As to Claims 11-12, the combination of Wiselogel and Swize discloses the method as claimed in claim 4, but fails to particular disclose wherein identifying the last usable track as a function of a position error signal (PES) value (figs.4-6, 8,10); as per claim 12, Emo et al. discloses that is well known in the art to use average PES and PES for adjusting crash stops (fig.4 col.3, lines 1-16). Therefore, it would have been obvious to of ordinary skill in the art at the time of the invention to modify the method as disclosed by Wiselogel and Swize with the disclosed teachings of Emo et al., the motivation to provide such method with the ability to detect crash stop location on the media, and increase the recording density of the disk drive.

As to Claims 21-22 are apparatus claims drawn to the method of claims 11-12 therefore are rejected for similar reasons as set forth in the rejection of claims 11-12, above.

#### ***Allowable Subject Matter***

2. Claims 7,13-14, 19,23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Patterson (US 6,480,361); Kisaka (US 6,754,031); Hong et al. (US 6,628,482); Klaassen (US 6,567,232); Mazda (US 6,140,784); Smith (US 6,600,622).

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the

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mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

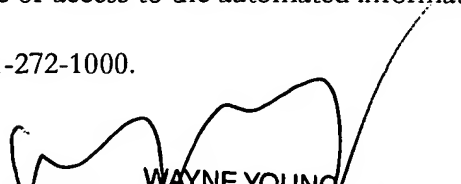
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dismery E. Mercedes whose telephone number is 571-272-7558. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DM



WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER